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THOMAS G. NEWMAN,
EDITOR.

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EDITORIAL BUZZINGS.

Many Bees Need Feeding during this cold and unseasonable weather. Do not let them starve just before the harvest is ready.

Every Apiarist should be well informed, not only on the habits, but also on the natural history of the honey-bee.

Another lot of statistical information is presented in *Gleanings* for May 15, from which we learn that the majority report the prospects favorable for a good honey crop.

In Reference to Mr. Moyer's letter, and our comments on page 307, he says that he is in favor of getting statistics, but not by the Government and assessors. So many are now engaged in gathering statistics that it may not be necessary for the assessors to "take a hand" in it.

Bees are not Mailable to Canada. We received an intimation of this from Dr. S. W. Morrison, of Oxford, Pa., and immediately wrote to Mr. Bell, Superintendent of Foreign Mails at Washington, for the facts in the case, and here is his reply:

WASHINGTON, D. C., May 16, 1888.

SIR:—In reply to your letter of the 14th inst., I have to inform you that under the Postal Convention now in force between the United States and Canada, queen-bees are absolutely *excluded* from the mails exchanged between the two countries, and consequently are not allowed to be forwarded by mail from the U.S. to Canada.

A proposal has been made to the Canada office to so modify the Convention as to admit, for the future, queen-bees to the mails; should it be accepted by the Canada office, public notice thereof will be promptly given.

N. M. BELL,
Supt. of Foreign Mails.

Alfalfa.—Mr. C. Thielmann, of Thielmanton, Minn., writes us as follows concerning the difference between alfalfa and lucerne clover:

There is a great difference in the illustrations on pages 68 and 245. The first shows exactly the clover which my father cultivated in Germany (Baden), and which has been planted in that country for centuries back. It did not hold out very long in white clay soil; but was a good stand for hay and green fodder for 20 years on rocky, lime-stony soil. We had no sandy land there, and so I do not know how it will do on it. The illustration on page 245, resembles the clover which I have seen on the Pacific Coast, and was called alfalfa. I am sorry to say that at that time I did not feel so much interested in the plant as I do now, and I did not examine it very closely, but I noticed enough in going by to see that it was not exactly like our German alfalfa, or, as we called it, everlasting clover. In Switzerland it was called lucerne. There is also a county in Switzerland called Lucern. The most noted difference seems to be that, the stalks of the German alfalfa are larger, the leaves larger and longer, and the seeds or flowers further apart, though the difference may result from the land or climate.

The difference is probably similar to sweet clover—the common variety is called melilot, while the imported is Bokhara clover. Lucerne is the common variety, while the alfalfa (or sand lucerne) is the imported article, and costs more than the common article, as does Bokhara clover cost more than melilot.

To Strengthen Weak Colonies is good advice for Spring management. Mr. E. K. Hubbard, in the *Indiana Farmer*, gives this advice on the subject:

It is an excellent plan to equalize the strength of your colonies in the spring, and instead of having a few very weak and the rest very strong, bring up the weak ones by taking from the others and giving to them. The reason why this can be profitably done is that giving brood to a weak colony will do more good than to leave it in the strong colony. A good colony can spare a frame of brood, and still keep full of bees, but if enough brood is taken away to show, in a few days, that they have been materially weakened, the matter has been over-done, and it would have been better to leave them alone. A full colony will gather many times more honey than several weak ones, but by intelligent and careful management all colonies may be brought up to near the same standard, and the good ones not materially injured.

Rendering Beeswax.—The London *Gardener's Chronicle* recommends as a simple method of obtaining clean beeswax direct from the comb, that the latter be melted in hot water, and a hoop that will fit into the container, covered with cheese-cloth, fastened down into it below the surface of the water. The melted wax rises to the surface through the cloth, and when the water is cool, is found on top in a perfectly clean cake.

Foul Brood seems to be very prevalent in many portions of Australia, as we notice from the April number of the *Australasian Bee Journal*, which has just come to hand.

Putting Supers On.—A few timely suggestions are given to beginners, and those who are not thoroughly posted in apiculture, by Mr. W. S. Cullinan, of Kansas City, Mo., in the *Farmers' Review* for this week. After mentioning the importance which attaches to the time and manner of putting on and taking off the supers, he remarks thus:

Doubtless white clover is now in bloom, and it will be time to have the supers in place, especially upon strong colonies. If you have studied the condition of your bees, you will know the colonies that are needing more room, and by all means you should be ready to supply it. If working for comb honey, you should have your supers filled with sections, which have been previously supplied with comb foundation, and give to each colony one case of sections—no more. Many specialists who work their bees for comb honey contract the brood-chamber to 5 or 6 frames before giving the first case of sections; this gives the bees less room below, and less brood to take care of, and so drives a greater number of them into the supers, by which, of course, more surplus is secured. Should any one wish to practice this method, all they will need to do is to remove one or two frames from each side of the brood-chambers, and substitute a division-board or dummy in their stead. The division-board should be of the same dimensions as the frame, and have projecting tops, so as to hang in the hive just as the frames do, and one of them should take the place of each frame removed, for if the space occupied by a frame in the brood-chamber be left vacant, the bees will certainly fill it with honey when they become crowded for room.

The British Honey Company seems to have been unsuccessful in business, and it is proposed to wind up its affairs. The following from the *British Bee Journal* for May 3, 1888, will explain the matter better than we can otherwise do:

We very much regret to announce that we have received a circular intimating that a meeting of the above company will be held at Charing Cross Hotel on May 10, when the following resolution will be proposed, "That it has been proved to the satisfaction of the meeting that the company cannot, by reason of its liabilities, continue its business, and that it is advisable to wind up the same voluntarily."

The Best of its Class.—This is what the Bath, Maine, *Sentinel* says about our BEE JOURNAL and bee-book:

The BEE JOURNAL is the best of its class, and "Bees and Honey" not only the latest, but the best among the works on the apiary and the honey-bee. It is profusely illustrated, and the text careful, concise and to the point. Its arrangement is good.

New Catalogues for 1888 are on our desk, from the following persons:

George Neighbour & Sons, 149 Regent St., W. London, England—64 pages—Bee-Hives and Appliances.

Dr. G. L. Tinker, New Philadelphia, O.—16 pages—Bees, Queens and Bee-Keepers' Supplies.

B. P. Barber & Son, Colebrook, O.—16 pages—Bee-Keepers' Supplies, Fowls, Turkeys, etc.

J. B. Haines, Bedford, O.—8 pages—Bees, Queens and Apiarian Supplies.

GLEANS OF NEWS.

THREE-SIDED HIVES.

Mention has several times been made in these columns of a three-sided hive made by D. Chalmers, of Poole, Ont. As we intend to keep our readers posted on the "developments of the times," we present the features of this hive with engravings from the *Canadian Honey Producer*. Mr. Chalmers does not claim to have invented any new kind of a hive, and the name "three-sided hive" is a misnomer. This is Mr. Chalmers' own description of what his invention consists:

New and useful improvements in bee-hives, consisting of movable sides, and a cut in the ends of the frames, by which the frames are suspended on iron slides, and one side of which engages a groove in the inner center of the ends of the hive, while the other side projects far enough to support the frames in C, a transverse groove in the center of the ends of the frames of about 11-32 of an inch in width; the slides pass

through the ends of the side pieces of the hive as well, and can be slipped in or out from either side; they are well adapted for supporting the frames, and at the same time are so secured that they cannot spring or bend under the weight.

When the hive is inverted, the comb frames drop 5-16 of an inch, and thus resume the same relative position as before. It is immaterial which side of the hive is up, and should the manipulator see fit to invert it, he may rest assured that on his return he will find the frames retaining their position, without danger of dropping out of place.

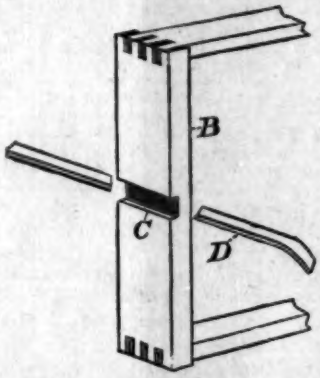
B indicates the comb-frames which are 5-16 of an inch less in verticle dimensions than the hive, so that when the latter is in position, the upper level of the top hive giving full bee-space between the top of the frames and the honey-board; they also hang slightly below the bottom of the hive.

By this arrangement it will be seen that when the latter is placed across the bottom-board, or of level pieces, that the frames will be raised to a degree sufficient to relieve the slides, which can then be easily withdrawn, alowing any of the frames to be taken out, or the hive lifted off, all frames at once, or without either changing the position of the hive or removing the slides, but simply by detaching the side, the manipulation is readily accomplished.

The reader will understand at a glance how nicely the movable-side works with my plan of suspending frames with closed ends, the method of securing adjustable side is yet incomplete, it should have spring enough to come and go with closed-end frames (or sections side by side) as affected by weather.

The bottom-board is also invertible. It is made of a board of equal width with the interior of the hive, with pieces nailed to the sides, and one end corresponding in thickness with the sides of the hive, and wide enough to project ⅜ of an inch on one side, and ¼ of an inch or more on the other side of the board; the former is for summer, and the latter for winter use, and requires to be turned up in early fall.

The winter extension I do not claim, but I am told that it is the invention of Mr. J.



B. Young, of Stratford (I also saw in a late issue of the AMERICAN BEE JOURNAL a similar board described, so far as I have gone). Across the center on the summer side of this board I drive a row of strong wire nails until the top of their heads come level with the top of the ledges, one nail under each frame. This is to prevent the frames from sagging; the interior of the frames are supported by a strong wire which reaches from the lower to the upper bar, and the frames in the cases above (should there be any) by a piece of tin 5-16 of an inch in width, which stands on the edge on the frames below. It is T-shaped on either end, and its position is maintained by those ends being placed between the lower and upper side frames.

The honey-board is made of woven strips of wood (same as window blinds); they are strong enough to carry their own weight across the hive, and only being propolized around the under edge of the hive, are easily ripped off.

The top, as shown in the engraving, consists of four narrow pieces being nailed together, rabbeted on one edge to rest on the hive. This is used for spring and fall packing, and in hot weather it keeps the cover at a distance from the combs and bees. The roof is flat, and is held in place by cleats being nailed to the lower side of it, which slips inside of the box.

The North American Convention was to have been held at Toledo next fall. It is proposed to change it to Columbus, O., and the following circular has been sent to each member to ascertain the views and votes in the matter:

Owing to the holding of the Ohio Centennial Exposition, at Columbus, O., from Sept. 4 to Oct. 19, next, and the consequent reduction of railroad fares, a goodly number of the members of the North American Bee-Keepers' Society, among whom are Miss Bennett, Messrs. Thos. G. Newman, A. I. Root, Eugene Secor, R.F.Holterman, James Heddon, Geo. E. Hilton, Dr. C. C. Miller, H. R. Boardman and Prof. Cook, have expressed the wish to have the place of the next meeting changed from Toledo to Columbus, and the executive committee has been urged to make the change, but the members of the committee are unanimous in the opinion that they have no more power to make the change than have any other members of the society; but at the request of some of the above named, and others, and in accordance with the best judgment of the committee, this circular has been prepared, and will be sent to every member of the society who has not already expressed their preference to the committee, and the request is that each one receiving this will say on the enclosed postal whether he or she is in favor of the change or not, and, if not, whether he or she is willing to abide by the wish of the majority. In corresponding, about 200, all who have expressed their preference, are in favor of Columbus. Please do not lay this aside, and make it necessary to write to you again, but put your answer on the enclosed postal card and return it at once.

A. B. MASON, *Pres.*
W. Z. HUTCHINSON, *Sec.*
MRS. L. HARRISON, *Treas.*
Executive Committee.

Swarming.—Mr. A. H. Duff, Creighton, O., gives his views upon the above subject in the *City and Country* in these words:

Excessive swarming is very detrimental to the crops of surplus honey, and to produce the best results in surplus, swarming must be controlled to quite an extent. To place a colony in the best possible condition for storing honey, is placing it in a condition to swarm also. The perquisites some colonies have for swarming is often very perplexing, and every manner of persuasion will finally wear out with them. We have found that if colonies are in first-class condition, or very strong in numbers at the opening of the honey flow, they are nearing the swarming point, and we can gain pounds by allowing a division, or a first swarm to issue. Too many bees can be kept in one hive to make it profitable, but, of course, we have reference only to powerful colonies, and would not wish to convey the idea that any profit can be obtained from weak colonies. Strong colonies is the road, and the only road, leading to large honey crops.

One of the most important points in securing large crops of honey is to give abundance of room for the bees to store it. This is also one of the best preventives of swarming. In the Italians and the other new races, however, this is not a decided prevention, but has some effect. But if this fails, and preparation is commenced (which will be the construction of queen-cells), we can postpone it by removing the queen-cells. This may be followed up just as long as it will produce the desired effect. This will oftentimes wear out, and the swarm, being tired of this kind of treatment, will come forth, leaving behind no trace of queen-cells whatever. There is but one remedy left, provided we wish them to occupy the hive as formerly. This is to take their queen away from them, and put them back again as before. This compels them to remain until young queens are reared, which will require 8 or 10 days.

Queenless colonies may for a time do well, but certain destruction is sure to follow if they are not provided with the same in due time. If a colony in the act of storing surplus should swarm, and the swarm hived to itself, the surplus receptacles should follow the swarm, as they can be brought to the condition for storing much sooner than the parent colony from which they issued.

All second or after-swarms are a failure if surplus honey is the object. After-swarms may be prevented by removing all queen-cells but one, or, what is better, remove all and introduce a fertile queen, of which a supply should always be on hand for such emergencies.

CONVENTION DIRECTORY.

1888. *Time and Place of Meeting.*

May 31.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd. Zastrow, Sec., Millhome, Wis.

Aug. 3.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Aug. 14.—Colorado State, at Denver, Colo.
J. M. Clark, Sec., Denver, Colo.

Aug. 27.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Wintering on Summer Stands.—Locke Ferree, Milroy, Ind., on May 12, 1888, says:

I winter my bees in the Langstroth hive, on the summer stands, with a ¼-inch pine board laid across the frames, with a bee-passage over the frames and under the board. I use no cloth, but a piece of muslin laid over the boards.

I notice that some bee-keepers are not receiving the Chapman honey-plant seed readily from Washington. I received mine in a very few days after I sent for it, but it seems a little tardy about coming up.

Bees Wintered Finely, etc.—Mr. John H. Martin, Hartford, N. Y., on May 8, 1888, says:

My bees have wintered finely, and I am hoping for a good honey season.

We are going to have a grand food products' exhibition at Albany, on Sept. 10 to 15. This was first started as a State exhibition, but it is now an assured fact that all portions of the country will be represented. If bee-men desire to make an instructive exhibit, this is a good opportunity. A space 12x12½ feet will be given to exhibitors for an entry fee of $10. I propose to make an exhibit. Are there other bee-men who will also exhibit? I will send a "bulletin" to any one who may desire to exhibit.

Good Outlook for Honey.—Mr. Francis M. Merritt, Andrew, Iowa, on May 12, 1888, writes:

Owing to the backward spring, bees are not gaining very fast. They gathered natural pollen on April 1, but extreme cold weather beginning about that time, the pollen-bearing plants failed to bloom, until about a week ago. I wintered 3 colonies of bees last winter, and have bought 5 more this spring; some of them were in quite a weak condition. The outlook for honey this year is very good. White clover is just blooming, owing to a week's steady rain. To-day is cold, the mercury indicating 6° above the freezing point.

Losses in Wintering, etc.—M. O. Tuttle, Osage, Iowa, on May 9, 1888, writes:

Sometime in March I reported my own anticipations and predictions for the wintering of the bees of this county. From what I have learned, I think that more than 50 per cent. of the number of colonies on Sept. 4, 1887, are now dead. As I stated before, I put 170 colonies in the cellar on Nov. 16 to 19, 1887. On April 7, 1888, I took 50 colonies out. On April 23 I took the rest out, and 168 colonies were lively and apparently in fine condition. I soon found that 2 colonies were queenless, but had plenty of bees and stores. I have united some, as I prefer to lessen my number of colonies for the season, and I shall continue to unite when the weather is favorable. The past two weeks has been rainy, and the thirsty earth is getting a good drink. Our prospects for some clover is good.

Susquehanna County Convention.—H. M. Seeley, of Harford, Pa., the Secretary of the Association, send the following condensed report:

The Susquehanna County Bee-Keepers' Association met at New Milford, Pa., on May 5, 1888. The meeting was called to order by President E. B. Smith, and then followed essays and discussions on the various questions pertaining to bee-culture. Taken altogether, it was a very enjoyable meeting, and doubtless of much benefit to those in attendance. Bees in this vicinity have wintered finely, but few being lost, but those that came through are in good condition. We have at present but 21 members, 16 of whom were present at the meeting. It is the wish of the association to have the name of all persons in the county who keep bees, on the roll as members; and it is intended to hold the meetings in the different towns in the county, to make it as convenient as possible for all to attend. The next meeting will be held in Montrose, Pa., on Sept. 8, 1888.

Very Rainy Weather.—C. Thielmann, Thielmanton, Minn., on May 9, 1888, writes:

My bees have been confined for about 10 days, on account of wet weather. It rained nearly day and night. The ground is flooded, and creeks and rivers are overflowing. There is only a little seeding done here, as we cannot get into the fields for a number of days yet, even if the weather should be good. It is raining now, and there is no signs of any good weather. I have lived for 31 years, but I never saw such weather at this time of the year. We could always seed in April, with a few exceptions, which was then done in May.

I have just seen the Zumbro river. It is very high, and has hardly been within its banks for the past five weeks. In my estimation, more water has passed here in this river in the five weeks, than in four or five years altogether heretofore. Yesterday was the first day that the railroad trains have run regularly since April 9, and we expect another tear up to-morrow. It has rained very heavily the past 24 hours.

Prospects for the Season.—John Blodget, Flag Springs, Mo., on May 14, 1888, writes:

Last October I packed 10 colonies of bees in chaff hives, and have lost only one colony. They are building up freely. Apple bloom has come and almost gone, and dandelion is in bloom. The weather has been so changeable that the bees could not work half of the time. We have had heavy rains, and the ground is more watered than it has been for four years. I think what white clover there is, will be good. I see ever so many young plants coming up after the rains, and it will be in good condition for another year. Most of the bees are dead in this locality, and what bees that are left will have plenty to work on. The black bees are all dead within three miles, so I can rear some fine bees from my young queens. I have started queen-cells. All my bees are pure Italians, except 1 or 2 colonies of good hybrids. All of my queens are reared from an imported mother. I think that every bee-keeper ought to have a pure queen to breed from, for the bees will deteriorate fast enough then, if he has neighbors that keep black bees.

Long Confinement of Bees, etc.—Wm. Malone, Newbern, Iowa, on May 11, 1888, writes:

I notice on page 312, that Mr. Eugene Secor kept his bees in the cellar 180 days. Some of mine were in 190 days. They were put in on Oct. 1, and taken out on April 1; this was for a test. Some were put in on Nov. 20, and 5 colonies were left out until the last of December; and those 5 were taken out the last of January, tucked up warm, and left out; I think that they are the strongest colonies in the yard to-day. Those that were left in 190 days are doing well. I winterep 47 colonies in a cave made for the bees, and 5 colonies on the summer stands. The temperature at which the bees are the most quiet is 40°, and the cave temperature has never been below that point.

One thing that bee-keepers should recollect when writing on the subject of hibernation is, that if hibernating animals, such as ants and snakes, be exposed to cold, freezing air for 30 minutes, there is no reviving them. They may be surrounded with frost for months and live; but 30 minutes of exposure as before stated, will kill them. Try it and see.

In 1887 I made a mistake in working 10 colonies for comb honey; and those 10 did little else but swarm. The 20 that I worked for extracted honey, stored 1,500 pounds, besides enough to winter them and the others—52 colonies in all. I had 5 colonies in the spring of 1887 that came nearly dying, and I had to feed them for winter. I lost 6 colonies last winter, 3 on the summer stands and 3 in the cave.

This has been a peculiar spring, being cold and dry up to May 5, and since then cold and wet. Buckeye is in full bloom, and the bees work hard when the sun shines. While I am writing I can hear the bees. A novice might think that the bees were swarming. Yesterday I prepared some colonies with two sets of combs, and if the weather is favorable, I will be extracting honey in a few days. I do not think that my bees were ever stronger on May 11, than they are this year.

A Peculiar Queen, etc.—Richard Rawlins, Okalona, Ark., on May 3, 1888, says:

Rattan is in bloom, but not in full bloom; the honey crop from this source promises to be better than usual. The strong colonies are storing honey in the third story now.

I noticed a queen, reared this year, which lays about half drone eggs intermingled with worker eggs in worker comb. She is not very prolific, but her bees are fine looking. Is she likely to overcome the weakness, or will she get worse?

[Most probably the queen will deteriorate, and it would be advisable to supersede her. —ED.]

The Convention.—The pamphlet containing the report of the proceedings of the Union Convention in Chicago, is now published, and can be obtained at this office for 25 cents. Or bound up with the history of the International Society, and a full report of the Detroit and Indianapolis conventions, for 50 cents, postpaid.

QUERIES & REPLIES.

The Proper Time to Extract Honey.

Written for the American Bee Journal

Query 544.—I intend to work the greater portion of my apiary for extracted honey, and have been thinking of adopting the following plan to keep down the swarming fever: Allow the prime swarm to go out, then after the queen has been caged, remove the old hive a short distance, and place a new one on the old stand having a queen-excluder over the brood-frames. After the bees have been hived, I will shake all of the bees out of the old hive, and run them into the new one, then examine the old frames thoroughly and remove all queen-cells, after which I will put them in a super over the newly-hived bees. 1. How long should I wait before extracting from the super? 2. How am I to dispose of the drone-brood in the super? 3. Would it be advisable to adopt the above method?—Ontario.

1. Extract when about one-third of the honey is capped. 2. Shave their heads off as they are capped over.—P. L. VIALLON.

1. I would extract from the super as soon as the honey is sufficiently ripened. 2. Let it hatch. 3. No.—M. MAHIN.

Instead of taking so much trouble, use 2 hives full of comb on top of each other, and you will have very few swarms, if you give them room in time.—DADANT & SON.

1. I should wait until at least a third of the comb was capped. 2. Cut it out. 3. I can see nothing gained.—J. P. H. BROWN.

Look here, my friend, letting the bees swarm is not a "plan to keep down the swarming fever." I doubt if you will like the plan so well as to simply keep the honey extracted close. C. C. MILLER.

1. So much depends upon so many circumstances. 2. Cut it out before it hatches. 3. No; you wont like this plan. I have tested so many similar principles, that I should say, no.—JAMES HEDDON.

1. It will all depend upon circumstances. 2. Cut it out and melt it up. 3. Your method will work all right, and if you prefer that way, follow it until you find a better one.—H. D. CUTTING.

1. Wait until all is sealed, or nearly so. 2. I do not have any to dispose of. Use only worker-comb. If there are patches of drone-comb, cut them out and put pieces of foundation in their place. 3. It is a good plan, but the queen-excluder is not needed.—A. B. MASON.

I do not like the method in theory; I have never tried it. I have had but little trouble to control swarming, when working for extracted honey.—EUGENE SECOR.

1. Until your frames are filled and capped. 5. With a honey-knife, slice off the heads of the drone-brood before you put the frames in the supers. 3. It would be tolerably fair practice.—MRS. L. HARRISON.

1. It will probably not do first until all the brood is capped over. 2. Cut it out and insert worker-comb; but how about the drones above the zinc queen-excluders? 3. I think that there are several better plans.—C. H. DIBBERN.

1. You could extract at once. 2. I do not know, unless you cut it out, and replace the vacancies with worker-combs. 3. I hardly think your plan advisable. Why not use *large* hives? You will then be trouble but little with swarms?—J. M. HAMBAUGH.

The plan would doubtless work fairly well, but it seems to me that you should have no trouble with swarming when running an apiary for extracted honey. In my experience along this line, not one colony in ten have attempted to swarm.—G. M. DOOLITTLE.

1. Wait until all the brood is sealed over. 2. A small auger-hole in any suitable part of the hive above the queen-excluder will let out all of the drones. 3. In producing extracted honey, the method may be advised where no increase is desired.—G. L. TINKER.

1. Until the combs contain a considerable amount of well-ripened honey. 2. That depends. You might cut out the drone-brood and destroy it; or let it hatch and fly away, as from time to time you open the hive. 3. No; as but few colonies in an apiary properly managed for extracted honey will cast swarms; unless their queens are past their prime, I should remove the queen, return the swarm and permit them to rear a young queen.—R. L. TAYLOR.

This question, or the questions, involve a big theory. The best I can advise is to test it thoroughly and report. The plan suggested would not work at all in my own apiary, as it will cause more labor and trouble than I can afford to give my bees.—J. E. POND.

1. Until room was needed, or sooner if desired. 2. Why not prune, so as not to have drone-comb. 3. I think that the plan is not a good one, though I have not tried it. If the queen is to be caged, why not put bees back in the old hive, and put on the super full of empty combs; or, if you have not combs, use foundation.—A. J. COOK.

In your statement you fail to tell what is to be done with the old queen, and this is a very important matter in the final results. If the queen is to go with the swarm below the queen-excluder, you will delay swarming; but if the season is a lengthy one, you will most likely have it over again. 1. Till the honey is sealed over. 2. Raise the hive cover in the afternoon, and let the drones escape, and close it when they are out. Keep this up until all are out. 3. Not as you state it.—G. W. DEMAREE.

I have not found this plan to lessen the swarming-impulse. By this method you allow the prepartions for swarming to be matured, and the swarming to actually occur, and then place the colony in almost the condition in which it was before it swarmed. I would prefer putting the new hive under the old one prior to the building of queen-cells. In a majority of cases this will prevent swarming entirely.—J. M. SHUCK.

1. When the brood is sealed over. 2. Decapitate the drone-brood. 3. The plan is too laborious and uncertain.—THE EDITOR.

Are Drones Allowed to Enter Different Hives?

Written for the American Bee Journal

Query 545.—Will drones from one colony be permitted to go into hives of other bees without being troubled by them?—Dixie.

Yes, usually.—JAMES HEDDON.

Yes, they quite often do.—H. D. CUTTING.

Yes, sometimes.—P. L. VIALLON.

Yes, at times.—J. M. HAMBAUGH.

I am not sure.—EUGENE SECOR.

They will ordinarily.—MRS. L. HARRISON.

Yes, as a rule, but not always.—G. M. DOOLITTLE.

Yes, if strong colonies.—J. P. H. BROWN.

Yes, at times; no, at other times.—DADANT & SON.

Sometimes they will, and sometimes they will not.—A. B. MASON.

In the swarming season, or at any time when honey is being gathered plentifully, they will.—M. MAHIN.

Yes, at times when the "other bees" will tolerate their own drones.—R. L. TAYLOR.

Yes, often; perhaps always when drones are tolerated.—C. C. MILLER.

I think so, but I am not sure that they will in all cases.—A. J. COOK.

During swarming time they will, but not at other times, as a general rule.—G. L. TINKER.

When honey is plentiful they probably often do so, but not when it is scarce.—C. H. DIBBERN.

In my own yard they are allowed to mix indiscriminately, and to go from one hive to another without being troubled at all.—J. E. POND.

Drones are free commoners until the time of their destruction arrives. I have set apart a nucleus for queen-rearing without a drone or any drone-brood, and in a few days I have found hundreds of drones in it.—J. M. SHUCK.

No, not as a general rule. They are admitted by queenless colonies as a general thing, but not always. Drones *mark* their *location* just as do worker bees; and if you introduce them to queenless colonies after they have *marked* their location, they will return to the old stand as do worker-bees. I have often proven this by direct experiment. If they are removed from their home before they have been out, they will stay where you put them just as do young worker-bees.—G. W. DEMAREE.

They will, as I have positive proof of the fact. I have one colony that hatched out select drones (Italians of course) on Jan. 10; it is the only colony out of 60 that has drones now (Jan. 25). I have another colony that hatched out a young queen last week, and after she was hatched I looked into the hive and found 4 or 5 drones on the middle combs, and I know this particular colony had not had any drones since last July—of course they came from the colony that had the young drones, which is nearly in front of the one with the young queen.—R. H. CAMPBELL.

Bees will usually admit drones from other colonies when honey-gathering is going on and the colony is strong in numbers, if drones are welcomed in other hives.—THE EDITOR.

CONVENTION NOTICES.

☞ The next meeting of the N. W. Ills. and S. W. Wis. Bee-Keepers' Association will be held in Rockton, Ills., May 22, 1888. D. A. FULLER, *Sec.*

☞ The spring meeting of the Wisconsin Lake Shore Center Bee-Keepers' Association will be held on May 31, 1888, in Mueller's Hall, at Kiel, Wis.
FERD. ZASTROW, *Sec.*

☞ The Hardin County Bee-Keepers' Association will meet at the Court House in Eldora, Iowa, on the second Saturday in each month, at noon (12 o'clock), until further notice.
J. W. BUCHANAN, *Sec.*

CORRESPONDENCE.

WHITE CLOVER.

MRS. L. B. FLEMING.

My little maiden came to me,
Her small hands brimming over,
Not with the garden's choicest flowers,
But only sweet, white clover.

I took her gift, the while my thought
The long years traveled over—
When I, like her, with busy hands
Made wreaths of sweet, white clover.

I dream my childish dreams again,
In fairy land a rover,
A magic garland, this, I ween,
Though only sweet, white clover.

Yet much of life's best sweetness we
In homely things discover,
As honey-bees pass gaudy flowers,
To seek the low, white clover.

COMB HONEY.

The Best Methods for Obtaining a Good Article.

Written for the Eastern Farmer

BY E. P. CHURCHILL.

As the time is at hand for obtaining comb honey, a word about the methods to be employed may not be amiss.

No doubt shallow frames without comb tend to drive the bees into the sections; but at the same time the queen must be suppressed in her duty, namely, to keep the colony supplied with brood; for where there is ample vacant cells, the queen is sure to increase even beyond one's expectations. I believe that I first gave the origin of my own plan in the Lewiston *Journal*, a number of years ago, which is in full harmony with the instincts of the bees.

As the queen will only use comb ⅛ of an inch thick, it must be shaved down to that depth. Now where there is much honey in the comb, it is to be extracted. But the combs must not be left, as it generally is, say ⅞ of an inch or so apart. They are to be closed up to at least ⅞ of an inch, and by using strips of wood ⅞x⅛, with a large-headed tack driven in the edge ⅛ of an inch from the top (the strip is half the length of the end-bar to the frame); these are now hung on the tin rest, and the frames crowded against them, one at each end of the frame next to the side of the hive, and so on. At last they are hung between the division-board and the last frame, and all crowded up close. Thus the frames are all spaced alike, and we can move the hives, and yet all is secure. Thus close, the bees cannot bulge much of the comb, and the queen is sure to use the natural thickness, which she has plenty of, and the bees are glad to enter the sections.

I am sure, too, that we need less comb in this way, and yet we are sure of more brood. I get nine frames into a hive only 11¾ inches wide; with even this number, the bees will work in the sections far better than in the old way, when crowded down on five or six combs, spaced away apart by bulged and thick comb. Such was sure to cause swarming, as instinct plainly teaches the bees that they must soon be unknown if no brood-room is provided; and how often we have found but little brood where there should have been an abundance, and yet the cause never occurred to us. This shaving and narrow spacing also prevents storing of pollen in the sections to a great extent, simply for the reason that there is plenty of room right among the brood, where it should be. Where one has a large number of colonies, there is a great saving in the comb, which is quite an item.

Of course for winter the combs are spread, and a "stay" like the above only ⅛ of an inch would please any one when he comes to move the hives into and out of the cellar, as they are simple and cheap, and remain nicely in place. Try it.

After trying about every method, I have proved the above plan to be *the one*. Also that it pays to use full sheets of foundation in sections, and to cover the boxes up warmly, and then rest assured if there is honey in the field, it will be carried into the sections.

Hallowell, Me.

INCREASE.

Methods of Obtaining Comb and Extracted Honey, etc.

Read at the Nebraska State Convention

BY J. M. YOUNG.

Knowing the interest taken in the advancement of bee-culture, I improve this opportunity of making a short report of my labors in that direction. The honey crop of last season was considerably below the average in this part of the State, and in certain parts an almost total failure. The fall crop was very light, owing to the continued drouth during the summer months.

Fruit-bloom and the early blossoms of white clover put the bees in good condition, and kept them so until swarming; but they secured only enough nectar from these sources to build up rapidly, and not enough to store any surplus. White clover proved nearly, if not quite, a failure in this part of the country, so far as I know.

About June 20, there was a fine flow of honey from the basswood blossoms, which grow abundantly on the banks of the Missouri river, and all along our water-courses. This flow lasted two or three weeks, when it ceased, leaving the bees with well-filled hives and a fair surplus stored in the sections. The balance of the season furnished the bees only enough to keep them in good condition, and keep brood-rearing under good headway.

The present condition of bees in general is very good, with the exception of late swarms, which will starve long before spring. My bees, which are being wintered on the summer stands, began the winter with all the conditions favorable, the colonies being strong in numbers, and having an abundance of well-ripened honey.

During 13 years' experience in apiculture, I have always practiced outdoor wintering. By actual test and experience in this matter, I long ago arrived at the conclusion that bees wintered on the summer stands successfully, must have protection against the extremes of temperatures of the cold winters of Nebraska. The bees wintered with proper packing, invariably come through the winter stronger in numbers, build up more quickly in the spring with less dwindling, and are in better condition to receive the harvest than those in single-walled hives standing side by side.

The inventory of my apiary at this date (Dec. 31) shows that 73 colonies out of 96 are packed in chaff on the summer stands, and if my experience is anything like it has been heretofore, I do not expect to meet with any unusual losses in wintering.

Making Increase by Division.

While dividing colonies for increase is preferred throughout the country by a large majority of bee-keepers, I practice and prefer in my own apiary, "natural swarming," from the fact that apiculture is my sole occupation for a livelihood, and I work the business for all that is in it.

If the bee-keeper has plenty of time and extra combs, with which to supply his divided colonies, he will without a doubt succeed with this method. I will say this in behalf of dividing colonies, from the fact that I do not wish to be understood to say that bee-keeping cannot be made success financially without it, viz:

If increase is the bee-keeper's object, and he has plenty of comb foundation already drawn out, and plenty of money in his pocket, by all means use the dividing-method of increase. On the other hand, my experience has enabled me to arrive at the conclusion that *natural swarming* pays best, if dollars and cents is the object to be sought.

The question might be asked, how do you control swarming? I do not always do it, but then to a certain extent I do. Just as soon as the bees begin to show symptoms of swarming. I put on the sections, and keep the bees supplied with plenty of room, never allowing them to be idle if there is honey in the fields. In a few days after the first swarm issues, I open the hive from whence the swarm came, and remove all queen-cells but one, if there seems to be no newly-hatched queen present.

Some apiarists may claim that bees will swarm too much, but my experiments in that direction have proven to the contrary. From 76 colonies, spring count, I obtained only about 30 swarms altogether, for the season of 1887; and in summing up all my reports from year to year, I cannot find one instance whatever, of doubling my number of colonies by natural swarming.

Dividing colonies is a safe way to increase, and can be carried to almost any extent; and while I have said so much against it, I could not well dispense with this new improvement in bee-culture; for it is by this means that all my nuclei colonies are formed, and queens reared.

Comb and Extracted Honey.

Now a few words as to my method of obtaining comb and extracted honey: The apiary is worked for both comb and extracted honey, from the fact that there is to be found in any apiary a number of colonies that do not feel disposed to work in surplus sections; whenever colonies of this kind are found, they are supplied with an extra set of combs, and by this means they can be induced to store a fair surplus of honey to be extracted. In this way a portion of my apiary is "rigged up" with two sets of combs, for extracting purposes. When honey begins to come in fast, these combs are placed in the extractor about once a week (or just as often as necessary), and the honey taken out. I seldom disturb the lower story in extracting.

The rest of the apiary, being composed of all strong colonies, is supplied with sections whenever necessary. When one case is partly full, it is raised and an empty one placed under it. My favorite section for obtaining comb honey is the 4¼x4¼ inches. I use two widths, namely, the 1¾-inch and the 2-inch. Which width is the best, I am not prepared to say.

My market demands a section that holds a pounds of honey; sometimes I get this pound in the 1¾-inch section, and oftimes in the 2-inch section. My judgment, based upon experience is, that a section which will hold as nearly as practicable one pound of honey, is what the trade and market demand.

In conclusion I will state that the season's work for 1887, summed up in a nut-shell, is not an encouraging report by any means. After uniting a few late swarms in October, I began the winter with 96 colonies, having had 76 colonies with which to commence the season's work. My sales of comb and extracted honey amounted to upwards of 1,700 pounds, about 1,500 pounds of which was produced during the last summer. The comb honey was disposed of at a good price. Extracted honey has had only a fair sale, but I am glad to say that the demand is increasing.

Rock Bluffs, Nebr.

QUEEN-REARING.

Methods for Rearing Good Queens.

Written for the American Bee Journal

BY S. A. SHUCK.

On page 297, concerning this subject Mr. J. E. Pond says: "Much that is written in regard to good queens is misleading to the beginner." Has not Mr. P. committed a greater error than those he endeavors to correct.

He also says: "I have further found that by the misnamed 'artificial method' of rearing queens, there is far less risk of producing from 10 to 13 day queens, than under the swarming fever." Here Mr. Pond conveys the idea that the production of 10-day queens under the swarming impulse is a common occurrence; also that 13-day queens are inferior.

If Mr. Pond has been troubled with 10-day queens under the swarming impulse, it is an exception that I have not met with in 12 years' experience with bees.

I am confident that the beginner, who secures his queens from his best colonies, under the swarming impulse, will not be wanting for good queens; and the results will be much more satisfactory than if he were to depend upon his own effort to secure them by the so-called "artificial method."

As I have no queens that are more than 13 days from the hatching of the egg, will Mr. Pond please tell why 13-day queens are not as good as any, provided that all other conditions are favorable?

How to Rear Good Queens.

To the beginner who would like to rear a few good queens for his own use, I offer the following method of securing them:

Select the best colony, and if there is little or no honey coming in from the flowers, feed this colony every evening, a little more than the bees will consume during the following 24 hours. Continue the feeding for a week, or until the colony is in a thrifty condition; then, on any afternoon remove the queen.

On the fourth day after removing the queen, open the hive and examine the combs carefully; if there are cells sealed, open them and examine the larva. Do not molest those not sealed. Replace the combs, and on the twelfth day from that on which the queen was removed, open the hive and cut out all the queen-cells but one, and put them where they are needed. Be sure to continue the feeding until the cells have been taken out. If you stop feeding, and there is no honey coming from the flowers, the bees are liable to destroy all the cells except two or three.

In the above way the queens will all be reared from eggs or larvæ less than 24 hours old, and the food from the cell from which the larvæ were removed can be given to the larvæ not yet sealed. This plan will produce good queens, and is much safer, and more economical for the beginner, than to purchase queens and take the risk of introducing them.

Liverpool, Ills.

FOUL BROOD.

Bee-Keeping and Curing Foul Brood in Germany.

Written for the American Bee Journal

BY WILLIAM KLINTWORTH.

My parents used to live about 18 miles from Bremen, Germany. They came to this country in 1836, and at that time there were many who kept bees there. They made their hives of straw in winter, as they were all made that way. Bees were generally fed in the spring, to get them strong, and to secure early swarms. The German bee-keepers would commence to feed by giving the bees a little once a week; as the season advanced, they would feed them once a day; and when spring opened, the bees could get pollen and nectar.

Great bee-keepers would move their bees three or four times during the season, where they could get the most honey. In the fall they would examine the hives, and those that weighed over 30 pounds were kept for the next season; for it took about that much honey to winter a colony. Those colonies that did not weigh so much, were killed, and the honey and wax were taken from them. The honey was pressed from the comb, part of which was saved for the next spring. If the bees needed more room, they would raise the hive up, and put an addition under it, so that the bees could build downward.

The greatest bee-man that lived there at that time, was Geo. Danker, who made bee-keeping his business. One year Mr. Danker had foul brood in his bee-yard. It was a serious matter with him, as he depended mainly upon his bees for a living. He obtained some sulphuric acid, mixed it with honey, and fed it to the diseased bees. He said, after he had fed it, that it was terrible to see the stuff lying under the hives; but his bees got well, and he obtained only 1,000 pounds of honey, where he should have had 2,500 or 3,000 pounds. Mr. Danker removed to this country about the time my parents came. He became a minister, and was well known in Ohio.

Mr. Wendelkin, a neighbor of mine, who lived in Germany, and at the same place, told me that in 1835 he fed his bees and was looking for swarms, for they had built queen-cells. But time passed, and they did not swarm. He did not know what to think of it, as he was a beginner in the business. He went to an old bee-man who lived there (a brother-in-law of Mr. Danker), and asked him to come and look at his bees—they had built queen-cells, but did not swarm. The man went with him, turned up a hive, and blew smoke down into it. "They are foul," he said. After an examination of the others, he pronounced them all diseased.

Mr. Wendelkin asked, "How can you tell?"

"O," said he, "I will show you."

He took a knife, and soon said, "You see those little holes there. Those are full of a mattery substance." Mr. Wendelkin asked, "Can I do anything to cure them?" "I have something that I will give you," was the reply. He then gave him sulphuric acid, which Mr. W. mixed with honey, fed it to the bees, and they got well, and swarmed late in the season.

Mr. Wendelkin came to this country about ten years after my parents arrived, and is now keeping bees in this neighborhood. Last spring he fed sulphuric acid to some of his bees. When he first commenced to feed it, he gave it so strong that they would not eat it; then he weakened it with sugar syrup. If it is mixed with honey it can be fed to bees stronger than when mixed in sugar syrup. Sulphuric acid is also used for curing chicken cholera.

Marietta, Ohio.

HIVING SWARMS.

Clipping of Queen's Wings, and Other Methods.

Written for the Bee-Keepers' Review

BY R. L. TAYLOR.

In preparation for the hiving of swarms when the time for their issuing comes, while making an examination of the several colonies in my apiary in the spring, I seek out each queen and clip one of her wings if one be not already clipped. I find it quite an advantage to do this before young bees begin to hatch largely, because then the bees are comparatively few, and the queen is generally easily discovered.

Then in anticipation of the advent of the swarming season, other preparations must be diligently attended to. Hives must be all ready for immediate use, and in a cool, shady place, as convenient as possible to the apiary. If the apiary be large, three or four baskets will be necessary, and a good supply of cages for the queens as they issue with swarms is indispensable. The cages I use differ from anything I have seen described, and may be made thus: Take a piece of soft wood ⅜x1 inch, 4½ inches long, and with a ¾ or ⅞ bit bore a hole through it from side to side so near one end as to leave at that end ½ inch of solid wood, and cut the stick carefully and squarely in two through the centre of the hole. Then enlarge the half circle in the larger piece by boring through it (the stick) one or two holes with a smaller bit, and smooth out with a knife. Also form a piece of wire cloth, 4 inches long, and about 3½ inches wide, around a piece of wood ⅜x1 inch, beat with a mallet, and weave smoothly together where the edges meet, then withdraw the wood, and having pushed into one end of the wire-cloth tube the shorter piece prepared as above, tack it firmly in place. Now push the longer piece into the other end of the tube for a stopper, and you have a cage always ready, convenient, safe and durable.

With these preparations all made I will suppose I am set to hive the swarms in a large apiary on a warm day in the height of the swarming season. Everything likely to be needed, including heavy wire hooks for suspending the baskets, a pair of large, white cotton sheets and a lighted smoker are at hand in the shade of a centrally located tree. It is 9 o'clock, and a hive near by spurting forth excited bees indicates that work has begun.

With a cage in my hand I step to the side of the hive and watch for the appearance of the queen in front. In one or two minutes she is seen climb-

the blades of grass, and trying to take wing. The open end of the cage, the stopper being withdrawn, is held immediately over her, when she at once enters and the cage is closed, placed in a basket, and the basket hung by its hook in a tree out of the sun, at a place where the swarm may find the queen. Take a new hive to the one sending out the swarm, removing the latter from its place and turning it around, put the new hive where the other stood, and change the section-cases from the old hive to the new. In the meantime the swarm has found the queen, and is soon clustered in the basket, when I pour the bees out upon the ground in front of the hive prepared for them, and when they fairly take up their march for their new home, I release the queen and see that she runs into the hive, because many of the bees will refuse to go in until she does. This is hardly done before another swarm issues. I cage the queen and arrange the hives as before, but the swarm, instead of finding the queen in the basket, begins to cluster at another place, so I at once remove the basket and hang it near that point, and the swarm at once takes possession of it. Before this one is fully hived, another swarm is in the air, and by the time I have caged its queen, it discovers her absence, and is already returning as I place their new hive in position. I hasten the return by placing the queen at the entrance, and as soon as the bees are rapidly alighting I release and run her in.

It is now 10 o'clock, and swarming has fairly begun. Two swarms now come out almost at the same moment, and unite in the air. I cage their queens, but notice that the swarms are attracted by the commotion at the hive into which the last swarm was put, and are already beginning to alight there. I push the queens into my pocket, snatch a sheet and the smoker, and spreading the former over the hive threatened with invasion, with a few puffs of smoke from the latter, I drive away the flying swarms, when they begin to cluster on a neighboring branch of an apple tree. I at once put each queen in a basket by herself, and hang the baskets together where the cluster is forming. Soon one basket has its share of the bees, and I steal it away and hang it out of sight in thick foliage, or set it in the bee-cellar.

Now other swarms come out—five in pretty quick succession—so I take the other basket with the swarm and hang it in plain sight on a branch favorable for holding a large cluster of bees, and convenient for shaking them off. Here, attracted by the swarm in the basket, all swarms will for the present congregate. I now proceed first to cage all the queens out, and all others as they come out and put them in baskets hung near the cluster, or out of the way in the shade until wanted. Then as I have time I arrange the hives, and hive swarms taken from the general cluster, giving each a queen until all the bees are distributed.

It would make a long story to recount all the expedients at times resorted to, to induce the bees to assist in making their hiving easy, but the foregoing indicates the general method pursued. Sometimes a swarm will cluster out of reach from the ground. In such cases, if practicable, a basket with the queen is hung under the cluster near the ground, and with a little shaking the cluster drops down, the queen is soon discovered, and the swarm gathers in the basket, or, if more convenient, a pole is used with a hook for the basket, say 20 inches from the upper end. The basket is raised with the pole and held under the cluster, while the latter is jarred off with the upper end of the pole.

With unclipped queens on a good day for swarms, I should be almost in despair. I have had but one queen superseded that I thought was superseded on account of clipping, and she had all four wings cut off short. My queens are not superseded soon enough to please me. I find too many that are approaching three years in age.

Lapeer, Mich.

HIVES AND NECTAR.

Winter Losses and Large Hives —Selling Nectar.

Written for the American Bee Journal

BY WILLIAM CAMM.

Out of 90 colonies my loss will be fully one-third. Looking for a better location last fall, I expected to move, or sell my bees, and would not break the brace-combs to look into them, preferring to let the winter weed them out, as we need a race of bees here that can stand drouth.

Most of the white clover was killed by the excessive dry weather of last year; our spring rains passed without getting much into the ground, as the frost was not out when they fell. The weather has continued dry, and though apple-trees are blooming profusely, the weather is too cool for bees to get much from them.

Many express impatience at the cool weather; but it is our only hope for rain. We have no moisture to send up to form the clouds that give us local rains, and summer showers; and should it turn warm, a calamity would result; for the heat radiated by the exposure of so much bare soil to an ardent sun, would force up to the condensing point and exhaust, and clouds that could otherwise reach us from a large body of water.

Hives to Suit Localities and Seasons.

Small hives may do for southwestern Michigan, where prevailing winds give rains from the lakes, but they will not not do here, unless we are able and willing to feed back more than the profits of our apiaries. My frame is 10x12 inches, outside measure. I have 60 hives with 10 frames and telescope caps, 5 Armstrong hives of the "Crown" pattern, and 25 hives with 13 and 14 frames, of my own make, but single-walled. All were treated alike, except the 25 of the colonies in 10-frame telescope hives had been used last season, with an upper story for extracting, and such colonies usually do not store as much in the brood-chamber as colonies used for producing comb honey.

All of my bees were exposed to the winter on the summer stands; but half of the colonies in the 10-frame hives are dead from starvation; 15 of those used for extracting having gone, although they had the advantage of double walls; only one in the 13 and 14 frame hives has died, though the walls were single, and no frames were taken out, or division-boards removed; while none in the Armstrong hives died.

I much prefer the 10-frame hive for convenience in handling, and with good seasons it will allow of as great a yield as a large hive; but since we cannot make the season to suit the hive, we must make the hive to suit the season.

Selling Nectar on Land.

On page 282, W. J. Willer suggests the selling of nectar land. Nectar is a natural product that cannot be gathered without the bee, and those who take the trouble to keep bees, should have the nectar for their pains. We must not forget, in this connection, that the bee was not made primarily, to gather honey, but to fertilize flowers; the gathering of honey is only incidental, and inducive to the fertilization of flowers. If, then, the bee-keeper should have to pay the land-owner for the nectar the bees gather, the land-owner should, in strict equity, pay the bee-keeper still more for the service performed by his bees.

But there is another phase to this question that must not be overlooked. We decided a hundred years ago that men were endowed by their Creator with an inalienable right to life, etc., but we have made a farce and mockery of this self-evident truth by prac-

tically denying men a natural right to the means of life, or to natural opportunities. We assert, in a national declaration, that the right to life is a natural right; but we legislate to make the means of life purchasable only. So far the right to gather nectar has been in accordance with our fundamental assertion of human right, but Mr. W. suggests a change, and that we carry the evil that is undermining our civilization, into practice, with regard to nectar as well as other bounties of nature.

A neighbor once asked me how much I was going to allow him for the honey that my bees had gathered off his pasture. My reply was that, if he would leave me enough for my family, he might take all the rest there was in my honey house—about 2 tons.

"What, for nothing?" he asked in surprise. "For nothing for the honey," I replied, "but I shall take 15 cents a pound for the trouble of gathering it. You would not ask me to 'work for nothing and board myself' would you?" That was the last I ever heard of honey being wanted by the land-owner; but that land-owner became a good customer.

When it is reasonable to ask a man to control the flight of his bees it will be time enough to talk about limiting his pasture for them, provided they are taking what would otherwise not be wasted.

Murrayville, Ills.

VENTILATION.

The Proper Way to Ventilate Hives.

Written for the American Bee Journal

BY L. W. LIGHTY.

Patent ventilations, or their venders, have deceived so many bee-keepers that ventilation is a subject not much spoken of. Bees are not such large consumers of oxygen, comparatively, as some other living beings. When in a state of quietude, they want very little air; but when they are at work, and the temperature is high, they will need much. The air for the bees should generally be supplied at the entrance, or from the bottom of the hive.

In this latitude it is most convenient and most profitable, to winter bees on the summer stands, packed with chaff or something similar. After placing the chaff cushion (which should not be less than 6 inches thick) on top of the frames or Hill's device, there should be an air-chamber between the cushion and the hive-cover of at least from 2 to 4 inches, and that air-chamber should be ventilated by two opposite holes from ½ inch to 1 inch in size. In that way the cushions will always be dry, and naturally warm and clean. If the hive does not have this top air-chamber and ventilation, the cushions will soon become damp, moldy and frosty, and then it would have been better to have had no cushions on at all.

Most chaff hives are provided with this air-chamber and the holes for ventilation. When using single hives, I generally use a second story or half-story for packing, but I do not like to bore holes in those, so I generally make a rim to fit the hive, about 3 inches high, and bore the holes in that. As soon as bees begin to rear brood on a large scale in the spring, they need much moisture and heat in the hive; therefore it is then best to cover them tight, and keep all the heat and moisture in. The entrance may also be contracted to suit the size of the colony.

In the summer, when the weather is very hot, top ventilation is good; but in our climate of sudden changes in temperature, the temperature in the hive frequently falls so low that the bees cannot work the wax in the sections, and that is a serious objection which should be avoided, and can be done only by closing the top ventilators; but as that is generally neglected, it is better to use only bottom ventilation and shade over the hive. If the bees are given a chance, they will ventilate the hive themselves in summer, but the entrance must be of the proper size for them to do it.

Mulberry, Pa.

WINTERING BEES.

In-Door vs. Out-Door Wintering of Bees.

Read at the Ohio State Convention

BY H. R. BOARDMAN.

There has always been a feeling of insecurity in bee-keeping as an occupation, on account of the uncertainty of wintering. This question settled, and some sure and reliable way of wintering, provided the business will be placed on a firm basis by the side of other industries.

The ground has all been gone over so many times, that it would seem useless to attempt to present anything new or interesting; and yet the wintering problem has not reached its solution. In-door and out-door wintering have their advocates, and both alike have their record of successes and failures. Out-door wintering is among my earliest, and, I may also say, my saddest experiences in bee-keeping. The most important factor in the wintering problem is climatic influence. There are others important that come within our control; but the influences of the weather we can at best only modify.

Cold does not kill the bees; but it comes in contact with the warmth produced by the living colony inside the hive, and condensation of moisture ensues. Moisture, combined with the cold, furnishes one of the most demoralizing and destructive conditions with which we have to contend in out-door wintering, both upon the bees and the stores. When a colony is so prepared that an excess of moisture accumulates within the hive, the stores (both honey and pollen) especially if unsealed, are contaminated by these conditions, and rendered unfit for the bees; and no amount of packing or protection against the cold will improve these conditions.

A large per cent. of the loss of colonies that have been specially prepared for out-door wintering is undobutedly the result of improper preparation. Colonies exposed to the severest cold, in climates much colder than ours, often winter in good condition without any protection whatever; even when subjected to the most reckless exposure in old, dilapidated hives, crumbling to pieces with age, and split and seamed from bottom to top, colonies have wintered year after year, for many years, while others, protected in the most careful manner, according to the most approved methods of modern bee-culture, have died.

We are perplexed and astonished at such results. The existing conditions were not those anticipated. The only conclusions are, that the favorable conditions in such exposed colonies that wintered well, over-balanced the unfavorable conditions; and, also, in such protected colonies that perished, there was a preponderance of unfavorable conditions, or, in other words, that such exposed colonies were in more favorable condition for wintering than the carefully protected colonies. This sounds strange, but is it not true?

I have often observed, that if the stores are of good quality, and remain in good condition, that the bees will also keep in good condition, and winter well, while if the stores are in bad condition, no amount of protection from the cold will avail in preserving the health and vitality of the colony. Even stores of inferior quality, if in good condition, are not necessarily fatal to the bees, if other conditions are favorable.

Mr. Hutchinson, in the AMERICAN BEE JOURNAL for 1887, page 650 says: "I have yet to lose a colony having cane-sugar stores, and wintered in a warm cellar, and by the method I now

employ." Does Mr. H. know that the same colonies would not have wintered well by any other reasonable method?

Mr. R. L. Taylor, at the Chicago convention, reported in the AMERICAN BEE JOURNAL for 1887, page 777, says: "I am confident that I can winter any fair colony well on stores, which are certainly good, by any of the approved methods." Who doubts his ability to do the same? Mr. Taylor also says: "I am satisfied that I cannot winter a colony well on stores that are decidedly poor in quality, by any method with which I am acquainted." Who can tell me how to do it? Stores may be so decidedly poor in quality that bees would not winter upon them by any method; but I have an abundance of evidence that stores decidedly poor in quality, if preserved in good condition, will not necessarily produce serious results, if aided by other favorable conditions.

I am aware that the results of in-door wintering are far from being uniform, and are very far from being satisfactory. Disastrous losses are not infrequent, even with apiarists of experience. Success depends as much upon the careful attention to details of preparation as does out-door wintering.

In-door wintering is my preferred method. It enables me, by my present methods, to secure all of the conditions favorable to wintering, both to the bees and the stores, with more certainty, and, at the same time, with less labor and expense, than the methods employed in out-door wintering.

In the construction of my first bee-house, I gave much attention to the ventilation. I had ventilating-tubes put in for the purpose. This was based upon theory. I have been compelled to change my views very much upon this subject.

My ventilators are now all taken out, being worse than useless, and I now employ no special means of ventilation whatever for my bee-rooms. But the most ample ventilation is given to each colony by leaving the bottom of the hives entirely open, and placing them upon stringers, one upon another, with an open space between, in such a manner that each hive is directly over the open space below. This gives what I term downward ventilation. It also affords an opportunity for all dead bees and rubbish to drop out of hive.

Of course, it would not be a matter of prudence to leave the bee-rooms closed throughout the season, disregarding all circumstances. I visit them on tours of inspection as often as I think occasion requires, and at the approach of warm weather I frequently leave the doors and windows open at evening and morning, in order to keep the temperature from getting too high.

There have been, during the past few years, some extravagant notions in regard to proper temperature of bee-houses and wintering repositories, and some immoderate reports and statements have been made that are well calculated to mislead even those of some experience. Some of the advocates of high temperature for wintering have gone to unwarranted extremes. I am myself convinced, by a liberal experience, that a high temperature is important to the welfare of the country, late in the season after brood-rearing has begun. But 50° to 55° I shall explain as the maximum, and 60° as the extreme of high temperature. It is well to avoid extremes of temperature, but I am not quite sure that uniformity is essential or even beneficial. I should prefer that the temperature go not below the freezing point, nor remain very long near it. But I have never been able to discover any very serious results from a low temperature, if not too long continued.

The use of artificial heat in bee-rooms in winter has attracted some attention. I have had considerable experience in its use, and at one time I became quite enthusiastic over it. But I do not attach as much importance to it as formerly. There are times during a long cold spell when it may be employed with benefit. I dispense with it in several of my apiaries entirely, and the comparative results in wintering show but little difference. I prefer to have the rooms perfectly dry, and sometimes I use lime on the floors to secure this condition.

East Townsend, Ohio.

SUNDRY ITEMS

About Bees and Bee-Keeping in New York.

Written for the American Bee Journal

BY JAMES EVANS.

The winter of 1886–87, with me, was disastrous. I had packed my bees carefully in chaff, although rather late, but the same as I had done previously, and I lost all but 2 colonies, and those were in poor condition. I then bought black bees in box-hives, and transferred them to frames of the Gallup size, and waited for results.

The spring opened fairly well, but bees barely held their own until nearly June 1, by which date strong colonies gave every indication of swarming; but at this time Alsike clover began to bloom, and I had about 2 acres near by. From that time for nearly four weeks swarming was entirely given up, and all the bees were entirely devoted to the Alsike. The 2 acres yielded about 100 pounds of surplus honey, besides what was used in the brood-chamber.

About July 1 Alsike and timothy was cut for hay, and better hay I never had. It was to most farmers a new thing here, but all were pleased, of the many who inspected it, and some has been sown, as a direct result. I vote for Alsike every time.

I produce only comb honey, and I have ready sale for all that I can spare, at 16 to 20 cents per pound. My yield per colony, spring count, was nearly 62 pounds per colony, mostly to be credited to the Alsike, without which I should have had much greater increase, as there was just yield enough to stimulate brood-rearing freely, but less surplus, for after July and sweet clover bloom we had very unfavorable weather—damp days and cool nights and mornings. Bees could not work freely, and they barely held their own for the remainder of the season, making it difficult to breed up nuclei and small colonies, so that many colonies went into winter weak in bees and with poor stores.

My strongest colonies I packed out-doors in chaff, the hives raised about 8 inches from the ground, over a box of leaves. The weaker colonies were put into a cellar where they could be looked after and fed when necessary, which I do by using partly-filled sections on top of the frames, covered by two thicknesses of carpet.

Fastening Foundation and Ripening Honey.

As to foundation, I use as little as possible in the sections—a **V**-shaped strip about 2 inches long by 1 inch wide at the base. I fasten it in the sections by using a stiff putty-knife, or a thin chisel, working where the sun can warm up both sections and foundation, with a little honey at hand to moisten the knife or chisel.

To start the bees in the section-case (I tier up), a few partly or wholly filled sections with comb, in the center of the case, is better than anything else that I know of.

To ripen honey, I leave it in the hives quite late, and by putting on 3 or more cases, bees soil the upper and finished ones but little, if any. To take off honey easily and rapidly, on a cool evening I take the cover off of the hive, and in the morning the filled cases will be mostly free from bees, and can, without smoke or disturbance, be removed bodily, and the hives covered again before the bees are flying, and thus avoid robbing. After taking it from the hives, I pile the filled cases 10 or 15 high, in a warm room, and cover them with cloths, when the few uncapped cells soon thicken so much that they will not break or leak.

Separators and Races of Bees.

In the beginning and at the close of the season, when honey comes in slowly, I think that separators are a necessity, to have the combs straight; but in a good honey-flow, I have no need of them; yet I cannot dispense with the small foundation starter or guide, to keep the combs straight in the sections. As to races of bees, the blacks are good, but disagreeable to work with; my best yield the past season was from a black colony—103 pounds of comb honey in sections. Carniolans have many good points, and I shall keep at least a few of them, if only to supply surplus combs in frames, partly built out and filled with brood for use at swarming time, and for making nuclei. Carniolans are good comb-builders, and wonderfully prolific breeders; and if the swarming impulse can be controlled, they are good honey-gatherers. In any case, for timid people they will prove valuable, being very gentle and easy to manage!

As for pure Italians, of a good strain, all things being considered, they are, in my estimation, *the bees*, and have come to *stay*. Too much cannot be said in their favor.

Hives for Producing Comb Honey.

As to hives, I will say that I have no Langstroth frames myself, but I am familiar with them and their workings, having occasion to handle them in neighboring apiaries. For comb honey in sections I do not like them—they have too much top area for the beginning and end of the season. It takes bees too long to get at work in the sections, and as soon as cool nights come, the bees too readily go down into the brood-nest for warmth. I like a hive with small top area, and a rather cramped brood-chamber. With me, the bees go up into the sections much more readily, and after once getting them at work, it is easy to keep them at it by tiering up. Besides, with a small section-case, honey is less liable to be mixed in the sections or case, as a good working colony frequently fills a small case in from 1 to 5 days in a good honey flow.

I have a simply-made hive in this way: The sides of ½ or ⅝ inch stuff; ends about 1 inch thick, and the cover simply a flat board, or boards thick or thin cleated with clinch-nails, and to prevent warping and melting of the combs, I put on top the same two thicknesses of rag carpet that I use over the frames for wintering, on top of which a stone or brick is put to prevent the wind blowing the carpet or cover off. It answers a nice purpose, and I cannot think of anything simpler or more convenient.

Making Section-Cases and Rearing Queens.

After trying many styles of section-cases, I am best pleased with **T**-tin ribs, either loose or fast, but I prefer them fast, and I have used them so for about four seasons. I also use propolis-shields or guards at the top and bottom of the sections, and they come out easily, and are neat and clean.

It will hardly pay the small bee-keeper to rear his queens, except for the knowledge he gains from the operation. I do, however, find it profitable, after my *best* and most valued colonies have sent out a prime swarm, to take from them all queen-cells but the *one* that is largest and best; the others I cage in a hatching-box, or frame, made by nailing screen-wire on one side of a regular frame, dividing the inside into small compartments, and on the back fastening with tack heads, strips of tin to slide in and out as covers. This I then hang in a strong colony, and as the queens hatch, if good and promising, they are used to replace others, to form nuclei, etc.

This is as far as I attempt to control or hinder swarming, and it almost universally prevents after-swarms, gives a supply of good young queens, and leaves both colonies in the best possible condition for profitable work.

The Chick-a-Dees Killing Bees.

When the bees flew freely, about Feb. 1, I for the first time discovered a new (to me) enemy of bees, viz., the chick-a-dees; perhaps 8 or 10 were constantly about and on the watch, and nearly every bee that alighted on the snow, and failed to rise, was, as soon as helpless, pounced upon, carried to a limb near by, and pecked upon at the back, the honey-sac extracted, and then dropped into the snow again. None, however, were taken until they became helpless and unable to rise!

Is this a new enemy, and will the habit be continued in the flying season? or have the birds been forced into it from starvation, caused by the long-continued cold weather and deep snow? Will some one having knowledge of the facts, please answer. As yet I have not that any, since the taking of the old and worn-out bees of course is not an actual loss.

Schaghticoke, N. Y.

A Pocket Dictionary will be presented for two subscribers with $2.00. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Your Full Address, plainly written is very essential in order to avoid mistakes.

New Subscribers can obtain the full numbers for 1887 and 1888, for $1.75, while there are any sets of 1887 left.

AMERICAN BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

If You Live near one post-office and get your mail at another, be sure to give the address that we have on our list.

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.

If you Lose Money by carelessly enclosing it in a letter, it is without excuse, when a Money Order, which is perfectly safe, costs but 5 cents.

Please to get your Neighbor, who keeps bees, to also take the AMERICAN BEE JOURNAL. It is now so CHEAP that no one can afford to do without it.

Preserve Your Papers for future reference. If you have no **BINDER** we will mail you one for 60 cents; or you can have one **FREE**, if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Yucca Brushes, for removing bees from the combs, are a soft, vegetable fiber, and do not irritate the bees. We supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Please write *American Bee Journal* on the envelope when writing to this office. Several of our letters have already gone to another firm (a commission house), causing vexatious delay and trouble.

Home Markets for honey can be made by judiciously distributing the pamphlets, "Honey as Food and Medicine." Such will create a demand in any locality at remunerative prices. See list on the second page of this paper.

Photographs of Bee-Keepers.—The "medley" gotten up by E. O. Tuttle, containing the faces of 131 representative apiarists, and a printed sketch of each one, will be sent with the BEE JOURNAL for one year for $1.75; or we will present it *free*, by mail, to any one, for a club of three subscribers and $3.00.

Apiary Register.—All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and begin to use it. The prices are as follows:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

Frank Leslie's Popular Monthly for June.—Summer Saunterings in Spanish San Sebastian is a charming bit of descriptive from the pen of Mrs. Frank Leslie, one of the most notable women of the day, equally skillful in the management of a great business and in literary effort, in prose or verse. The description of the famous old frontier town, now becomes a resort of gayety and fashion, is full of characteristics touches. The stories are all bright, attractive, and well written, and the *Popular Monthly* for June gives a most attractive and interesting mass of reading for the pleasant days when travel or a shaded porch invite one to read.

Honey and Beeswax Market.

DETROIT.

HONEY.—Best white in one-pound sections, 15c. Extracted, 9@10c. Large supply and few sales.
BEESWAX.—23@24c.

Apr. 24. M. H. HUNT, Bell Branch, Mich.

CHICAGO.

HONEY.—Prices range from 15@16c. for best one-lb. sections; other grades are slow, at lower prices. Extracted, 7@8c. Light demand, and supply larger than usual at this season of the year.
BEESWAX.—23c.

May 1. R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 14@15c.; fancy 2-lbs., 12c. Lower grades 1@2c. per lb. less. Buckwheat 1-lbs., 10@10½c.; 2-lbs., 9@9½c. Extracted, white, 7@7½c.; dark, 5½@6c.

Mar. 19. F. G. STROHMEYER & CO., 122 Water St.

CHICAGO.

HONEY.—We quote: Fancy white clover 1-lbs., 16@17c.; 2-lbs., 15@16c. Dark is slow sale at almost any price. Extracted is scarce, and sells at 7@10c.
BEESWAX.—23c.

Mar. 13. S. T. FISH & CO., 189 S. Water St.

CINCINNATI.

HONEY.—We quote extracted at 4@9c. per lb., for which demand is good. Comb honey, 14@17c.—Demand slow.
BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.

Apr. 23. C. F. MUTH & SON, Freeman & Central Av.

MILWAUKEE.

HONEY.—Choice white one-lb. sections, 16@17c.; 2-lbs., 15@16c.; 3-lbs., 14c. Extracted, white in kegs and ½-barrels, 8 to 8½c.; in tin and pails, 9½@10c.; dark in barrels and kegs, 5@7c. Market fair.
BEESWAX.—22@25c.

Apr. 23. A. V. BISHOP, 142 W. Water St.

DENVER.

HONEY.—Best white 1-lb. sections, 17@19c.; 2-lb. sections, 15@17c. Extracted, 7@10c.
BEESWAX.—20@23c.

Mar. 1. J. M. CLARK & CO., 1409 Fifteenth St.

KANSAS CITY.

HONEY.—We quote: Choice white 2-lb. sections, 17@18c.; dark 2-lbs, 14@15c.; choice white 1-lbs., 18 to 20 cts.; dark 1-lbs., 15@16c. White extracted, 7@8c.; dark, 5@6c. Demand is slow. White extracted is firm when in 60-lb. tin cans.
BEESWAX.—21 to 22c.

Mar. 29. HAMBLIN & BEARSS, 514 Walnut St.

BOSTON.

HONEY.—We quote: 1-lb. sections, 16@17c.; 2-lb. sections, 14@16c. Extracted, 8@9c. The market is not very brisk and sales are slow.
BEESWAX.—25 cts. per lb.

Mar. 24. BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—We quote: White to extra, 10@17c.; amber, 9@14c. Extracted, white liquid, 7@7½c.; amber and candied, 6@7c. Market quiet.
BEESWAX.—18@21c.

Mar. 20. SCHACHT & LEMCKE, 122-124 Davis St.

KANSAS CITY.

HONEY.—We quote: White 1-lbs., glassed, 16@17c; unglassed, 17@18c.; and dark 1-lbs., glassed, 15c.; unglassed, 16c.; white 2-lbs., glassed, 16c.; unglassed 2-lbs., 17c. California white 2-lbs., 17c. California extracted in 60-lb. cans, 8c. Market quiet and receipts are larger.
BEESWAX.—No. 1, 20c.; No. 2, 18c.

Mar. 19. CLEMONS, CLOON & CO., cor 4th & Walnut.

Red Labels for Pails.—We have three sizes of these Labels ranging in size for pails to hold from one to ten pounds of honey. Price, $1 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than 100. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1.50	$2.00	$2.25
500 Labels	2.00	3.00	3.50
1,000 Labels	3.00	4.00	5.00

☞ Samples mailed free, upon application.

Alfalfa Clover.—For habits and cultivation of this honey-plant, see page 245. We supply the seed at the following prices:—Per lb., 22c.; per peck, $3.00; per half-bushel, $5.50; per bushel of 60 lb., $10.00. If wanted by mail, add 18 cents per pound for bag and postage.

Clover Seeds.—We are selling *Alsike Clover Seed* at the following prices: $8.00 per bushel; $2.25 per peck; 25 cents per lb. *White Clover Seed:* $10.00 per bushel; $2.75 per peck; 30 cents per lb. *Sweet, or Melilot, Clover Seed:* $6.00 per bushel; $1.75 per peck: 20 cents per lb.—by express or freight.

A Modern BEE-FARM, and its Economic Management; showing how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man. By S. Simmins. For sale at this office. Price, $1.

We Supply Chapman Honey-Plant **SEED** at the following prices: One ounce, 40 cents; 4 ounces, $1; ¼ pound, $1.75; 1 pound, $3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

Paper Boxes—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections 4¼x4¼ and 5¼x5¼. Price, $1.00 per 100, or $8.50 per 1,000.

Give a Copy of "Honey as Food and Medicine" to every one who buys a package of honey. It will sell lots of it.